

nitride layer 13 and increasing the concentration of the donor that decreases the in-plane lattice constant towards the interface with an AlGa<sub>N</sub> active layer 14 will be advantageous for overgrowth of thick AlGa<sub>N</sub> layers as required for growth of mirror stacks in surface emitting lasers, for example, co-doping with Si and Ge, and increasing Ge concentration towards the AlGa<sub>N</sub> interface.

Kim, K. S. et al.: "The study on the growth and properties of Mg doped and Mg-Si codoped p-type GaN" Solid-State Electronics, Sep. 1999, vol. 43, No. 9, pp. 1807-1812, XP002165928, ISSN: 0038-1101.

Yamamoto, T. et al.: "Electronic structures of p-type GaN codoped with Be or Mg as the acceptors and Si or O as the donor codopants" Journal of Crystal Growth, 1998, vol. 189-190, pp. 532-536, XP004148570, ISSN: 0022-0248.